

REMARKS

Claims 1-13 and 15-22 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

CLAIM OBJECTIONS

Claim 14 is objected to in that it is dependent on non-elected claim 11. Claim 14 is cancelled.

REJECTION UNDER 35 U.S.C. § 112

Claims 1 to 10 and 14 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point and distinctly claim the subject matter which Applicant regards as the invention. This rejection is respectfully traversed.

- I. The phrase "*kind of*" is deleted from claim 1. Claim 14 is cancelled.
- II. The term "it" is deleted from claims 1, 2 and 3.
- III. The phrase "intersectioning point" is amended to "intersection point".
- IV. The term "the" is deleted from claims 1 and 2.
- V. The term "through" is inserted after the term "passes" in claim 1.
- VI. The term "its" is replaced with "a" in claims 5 and 6, and is deleted from 9.
- VII. The term "of" is replaced with "in" in claim 7.

VIII. The phrase "which is manufactured by using" is clarified in claim 8.

XI. The term "is" has been changed to "has been" in claims 7, 8 and 9.

XII. Claim 14 has been cancelled.

REJECTION UNDER 35 U.S.C. § 102/103

Claims 1 to 10 and 14 are rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over each of Panchanathan (US Patent No. 5,725,792, cited by applicants in the IDS submitted January 4, 2001) or Schultz et al. (Schultz, cited by applicants in the IDS submitted January 4, 2001).

Regarding Panchanathan, Applicant respectfully submits that the taught amount of boron is outside of the claimed range. Column 3, example 2, alloy N is 1.07% B. The claimed range is 4.6 – 6.9% B.

Regarding Schultz, there is no description that directly refers to the density ρ of the bonded magnet, but as stated in line 7 of page 200, the amount of the epoxy resin contained in the bonded magnet is 1.5wt%. This means that in Schultz the amount of the magnetic powder is 98.5wt%. This amount of magnetic powder in Schultz is higher than that of the present invention. Please see Example 1 of this application, where the amount of the magnetic powder is 97wt% (first paragraph of page 30 of the English text).

In general, when two bonded magnets are manufactured using magnetic powders having the same magnetic properties, a bonded magnet containing a large amount of the magnetic powder naturally exhibits higher magnetic properties. However,

between the bonded magnet of the present invention and the bonded magnet of Schultz, this relationship is reversed (that is, the amount of the magnetic powder of the present invention is less than that of Schultz, while the magnetic properties of the present invention are higher than those of Schultz). This means that the magnetic powder of the present invention is better than that of Schultz. It is respectfully submitted that this is because Schultz does not satisfy the relationship between the density ρ of the bonded magnet and the magnetic properties as called for in claim 1.

In addition, it is respectfully submitted that the Schultz reference does not teach the irreversible susceptibility (χ_{irr}) called for in claim 1. The claimed invention is distinguished from Schultz in this point. The claimed invention is patentable therefore over Schultz.

DOUBLE PATENTING

Claims 1 to 10 and 14 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 to 12 and 18 of copending Application No. 09/754,823. Applicant submits a terminal disclaimer herewith regarding Application No. 09/754,823.

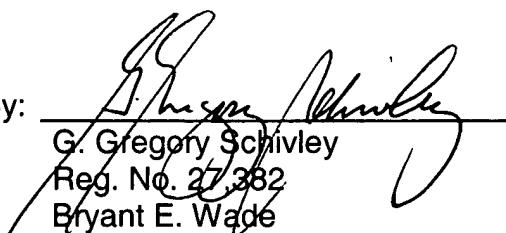
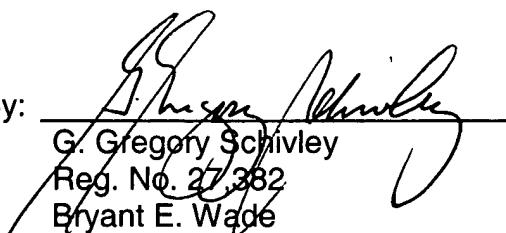
CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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ATTACHMENT FOR CLAIM AMENDMENTS

The following is a marked up version of each amended claim in which underlines indicates insertions and strikethroughs indicate deletions. Note that brackets [**] DO NOT indicate deletions.

1. (Amended) Magnetic powder composed of an alloy composition represented by $R_x(Fe_{1-y}Co_y)_{100-x-z-w}B_zNb_w$ (where R is at least one kind of rare-earth element, x is 7.1 – 9.9at%, y is 0 – 0.30, z is 4.6 – 6.9at%, and w is 0.2 – 3.5at%), the magnetic powder being constituted from a composite structure having a soft magnetic phase and a hard magnetic phase, wherein the magnetic powder has magnetic properties in which, when the magnetic powder is formed into an isotropic bonded magnet by mixing with a binding resin and then molding it, the irreversible susceptibility (χ_{irr}) which is measured by using an intersectioning point of a demagnetization curve in the J-H diagram representing the magnetic properties at the room temperature and a straight line which passes through the origin in the J-H diagram and has a gradient (J/H) of $-3.8 \times 10^{-6} H/m$, as a starting point is equal to or less than $5.0 \times 10^{-7} H/m$, and the intrinsic coercive force (H_{cJ}) of the bonded magnet at the room temperature is in the range of 320 – 720 kA/m.

2. (Amended) The magnetic powder as claimed in claim 1, wherein when the magnetic powder is formed into an isotropic bonded magnet having a density ρ [Mg/m^3] by mixing with a binding resin and the molding it, the remanent magnetic flux

density $Br[T]$ at the room temperature satisfies the relationship represented by the formula of $Br/\rho [x10^{-6}T\cdot m^3/g] \geq 0.125$.

3. (Amended) The magnetic powder as claimed in claim 1, wherein when the magnetic powder is formed into an isotropic bonded magnet by mixing with a binding resin and then molding it, the absolute value of the irreversible flux loss (initial flux loss) is equal to or less than 6.2%.

5. (Amended) The magnetic powder as claimed in claim 1, wherein said R includes Pr and its a ratio of Pr with respect to the total mass of said R is 5 – 75%.

6. (Amended) The magnetic powder as claimed in claim 1, wherein said R includes Dy and its a ratio of Dy with respect to the total mass of said R is equal to or less than 14%.

7. (Amended) The magnetic powder as claimed in claim 1, wherein the magnetic powder is has been obtained by quenching the alloy of in a molten state.

8. (Amended) The magnetic powder as claimed in claim 1, wherein the magnetic powder is has been obtained by milling a melt spun ribbon of the alloy which is manufactured by using with a cooling roll.

9. (Amended) The magnetic powder as claimed in claim 1, wherein
the magnetic powder ~~is~~ has been subjected to a heat treatment for at least once during
the manufacturing process or after ~~its~~ manufacture manufacturing.